

REMARKS

Applicants thank the Examiner for examining the application, and for indicating that the subject matter of claim 14 is allowable if rewritten in independent form. Applicants has added to the specification a new paragraph replacing former paragraph [0002], which now includes the application serial numbers for the co-pending applications originally identified only by their Attorney Docket numbers. Applicants have also corrected the typographical error pointed out by the Examiner in paragraph [0023]. Applicants have amended claims 1, 2,4-5, 7, 13, 15, 20, and 22-24, cancelled claim 6, and added new claims 25-31, support for which may be found throughout the specification. No new matter has been added by these amendments.

Drawings

Applicants believe the replacement drawings attached to this paper are in compliance with 37 C.F.R. § 1.84 and 37 C.F.R. § 1.121, as required by the Office Action, and that all changes have been adequately described above.

Information Disclosure Statement

Applicants present herewith a concise explanation of the relevance of cited reference FR2763682:

The invention concerns a device for measuring liquid level in a tank comprising a probe and a processing circuit connected to the probe to supply a signal representing the liquid level in the tank. The probe comprises a transmitter antenna and a receiver antenna,

the immersion of the two antennae being a function of the liquid level. The processing circuit comprises a generator of electric signals and means to convert the amplitude of the electric signals received by the receiver antenna into a signal representing the liquid level in the tank.

Claim Rejection - 35 U.S.C. § 103(a)

The Examiner rejected claims 1-3, 6-9, 11-13, 20, 22, and 23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,137,282 to Macke, Sr. et al.

Applicants' amended independent claim 1 requires, among other things, a transmitter operable to drive the first electromagnetic signal along the first conductive element without also driving the second conductive element, which a receiver monitors. By thus refraining from driving the second conductive element, Applicants avoid interference (e.g., ringing, saturation, etc.) that results from the receiver monitoring a conductor that the transmitter drives directly. Avoiding this interference increases the detection and measurement capabilities of the receiver in embodiments of the current invention. Macke, Sr. et al. discloses that electrical pulses are transmitted down cables 304 and 306 from a pulse source that is part of the TDR electronic components 302; *see* col. 4 line 66 to col. 5 line 16. That is Macke, Sr. et al.'s TDR electronic components 302 drive both conduction elements 304 and 306, which Macke, Sr. et al.'s receiver monitors. This differs from a transmitter operable to drive the first electromagnetic signal along the first conductive element without also driving the receiver-monitored second conductive element, as required by Applicants'

independent claim 1. Thus, Applicants' independent claim 1 is not obvious in view of Macke, Sr. et al.

Applicants' independent claim 20 contains elements similar to those of Applicants' independent claim 1. Therefore, for the reasons given above, Applicants' independent claim 20 is not obvious in view of Macke, Sr. et al.

Applicants' dependent claims 2-3, 6-9, and 11-13 depend from independent claim 1; Applicants' dependent claims 22 and 23 depend from independent claim 20. Therefore, these dependent claims are also allowable, as they depend from allowable base claims 1 and 16.

The Examiner rejected dependent claims 4, 5, 15-18, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Macke, Sr. et al. in view of U.S. Patent No. 6,229,476 to Lutke et al. The Examiner then rejected dependent claims 10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Macke, Sr. et al. in view of U.S. Patent No. 5,910,188 to Resnick. The Examiner next rejected dependent claim 19 under 35 U.S.C. § 103(a) as being unpatentable over Macke, Sr. et al. in view of U.S. Patent No. 6,373,261 to Kielb et al. Dependent claims 4, 5, 10, 15-18, and 19 depend from independent claim 1, while dependent claims 21 and 24 depend from independent claim 20. Thus, in the rejection, the Examiner incorporates verbatim the initial rejection of claims 1 and 20 by Macke, Sr. et al. As discussed above, Macke, Sr. et al. does not teach or suggest all the elements of Applicants' independent claims 1 and 20. Further, none of the other cited references (Lutke et al., Resnick, and Kielb et al.) teach or suggest a transmitter operable to drive the first

electromagnetic signal along the first conductive element without also driving the second conductive element, as required by Applicants' independent claims 1 and 20. Thus, because dependent claims 4, 5, 10, 15-18, and 19 depend from allowable independent claim 1, and dependent claims 21 and 24 depend from allowable independent claim 20, these dependent claims are also allowable.


CONCLUSION

Applicant believes this Amendment and Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicant respectfully submits that this application is in condition for allowance. Accordingly, Applicant requests allowance of the application.

Applicants invite the Examiner to contact the Applicants' undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,

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IN THE DRAWINGS:

The attached nine sheets of drawings include changes to Figs. 1-7B. These sheets, which include Figs. 1-7B, replace the original sheets including Figs. 1-7B.

In accordance with the Office Action, the drawings no longer contain hand drawn characters and figures, and thus comply with the requirements of 37 C.F.R. § 1.84.